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ABSTRACT

The Software Subcommittee of the National Commission on New Technological Uses of Copyrighted Works (CONTU) has proposed some changes in the new copyright law to provide specific protection for computer programs. The rationale for this recommendation includes (1) the necessity for some form of protection to encourage the creation and broad distribution of computer programs in a competitive market; (2) copyright protection is more uniform and cost effective than other forms of protection for intellectual property, e.g., trade secrecy; and (3) clarification of the rights of computer program copyright holders and potential users is needed. Legal implications of the proposed new Section 117 (to replace Section 117 of Title 17 as enacted) are discussed. (CMV)

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REPORT OF THE SOFTWARE SUBCOMMITTEE TO THE NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS

by

National Commission on New Technological Uses
of Copyrighted Works (CONTU)

IR006671

NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS
(CONTU)

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REPORT OF THE SOFTWARE SUBCOMMITTEE

TO THE

NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS

I. Introduction

This report contains the recommendations of the Software Subcommittee of the National Commission on New Technological Uses of Copyrighted Works (CONTU) concerning the way in which computer programs should be dealt with by changes in Title 17 of the United States Code (the Copyright law of the United States). These recommendations have not been adopted by the Commission.[1/] They are being circulated at this time in order that written or, when appropriate, oral comments may be made by interested parties so that the Commission will be able to base its final report in this area on the broadest possible foundation.

The Software Subcommittee has sought to determine how to balance important individual and societal interests which conflict with one another to a certain extent. Those interests include the broad dissemination of works of authorship -- here, computer programs; the ability of authors to recover their costs from the distribution of their wares; and the protection of works of authorship against their misappropriation. The Subcommittee submits that these interests can best be balanced with respect to computer programs, as

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1/ Indeed, certain Commissioners are skeptical about the need for any form of protection for computer programs as well as the copyrightability of such works. See Part V, entitled "Postscript."

with all other works of authorship, by affording such works copyright protection. 2/

The United States Constitution provides that Congress has the power to promote artistic and scientific progress by granting limited monopolies to authors and inventors. Congress has exercised this power by enacting copyright and patent laws. The underlying rationale for such laws is that they provide incentives for the creation and distribution of original works which are of value to society. Copyright law gives moderate protection to the original writings of authors for an extended period of time without regard to the quality of the work. Patent law, on the other hand, gives stronger

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2/ It is interesting to note that after a three-year study, the British Committee to consider the Law on Copyright and Designs, in its report to Parliament, made recommendations concerning computer programs which are very similar to those contained in this draft. Paragraph 520 of that report (known, after the committee's chairman, as the Whitford Report) contains the following recommendations:

1) Computer programs should be treated, for copyright purposes, as literary works.

2) The storage of copyrighted material in a computer memory should be an action over which the copyright owner has control.

3) Programs and data bases should enjoy the same terms of protection as other copyrighted works.

4) Copyright in works produced with the aid of a computer should belong to those who devised the instructions and originated the data which led to that particular result.

5) The unauthorized "use" of a copyrighted program should be an infringement.

The Whitford Committee was unanimous as to the first four recommendations, but there was a division concerning the fifth, with a majority favoring the "use-infringement" result.

protection to certain discoveries of inventors for a much shorter period of time if and only if the federal government is satisfied that the work is useful, novel and nonobvious to those familiar with the related technology. Very broadly, copyright is designed to protect the expression of ideas while patent's purpose is to protect what are generally understood to be inventions -- in a sense the ideas themselves.

In discussing computer programs attempts are often made to explicate various problems by the use of analogies in which the statement "computer programs are more or less like..." is frequently used. Indeed, the Subcommittee has in the past resorted to such devices. Programs, unfortunately or otherwise, are "like" little else. They are, however, writings which set forth instructions or sets of instructions. As simple as this sounds, it bears emphasis: they are not "like" books, paintings, or television sets. They are instructions fixed in a tangible form of expression. As will be discussed in some detail below, they are thus within the ambit of traditional American copyright.

A computer program is a writing which sets forth instructions which can direct the operation of an automatic system capable of storing, processing, retreiving or transferring information. It is an explanation of a process and not the process itself. This distinction between the process and the writing which describes it is of critical importance to understanding how copyright applies to computer programs. With a computer program as with

all forms of creative endeavor, there are three different phenomena:

1) A description of the activity (process);

2) The activity (process) itself; and

3) The results of the activity (process).

Descriptions of a process are protectable through copyright without regard to whether they are narrative descriptions or lists of instructions.[3/] Processes or principles of operation -- indicated by the second category -- are protectable, if at all, through patents or trade secrecy. The copyright status of the results of the activity or process is not dealt with in this report which is concerned only with the copyright status of the computer program. At all events the program is not the process itself but is a writing

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3/ It has been suggested that a program, in object code -- that form of the program which when inserted in the computer activates machine operations -- might be constitutionally uncopyrightable because of its lack of communicative potential. To the untrained reader the object code does seem to lack communicative potential. That could also be said, however, of such clearly copyrightable works as a book in Sanskrit or a mathematical table of numbers. The Subcommittee is strongly of the opinion, that, if lines must be drawn between those forms of programs in which copyright may, and those forms in which it may not constitutionally subsist, that should be done by the judiciary to whom such tasks have traditionally been given in light of changing technological and marketplace conditions rather than by the Commission in its recommendations to Congress.

Copyright protection for programs would clearly be constitutional and invulnerable to attack directed at their utilitarian and apparent non-communicative nature. It is noteworthy that ever since the 1909 revision, such diverse works of authorship as telephone books, Leon v. Pacific Tel. & Tel. Co., 91 F.2d 484 (9th Cir. 1937); freight tables, Guthrie v. Curlett, 36 F.2d 694 (2d Cir. 1929); interest tables, Edwards & Deutch Lithographing Co. v. Boorman, 15 F.2d 35 (7th Cir. 1926); lists of motor vehicle registrants, New Jersey Motor List Co. v. Barton Business Serv., 57 F.2d 353 (D.N.J. 1931); and lists of otherwise meaningless five-letter code "words", Reiss v. National Quotation Bureau, 276 Fed. 717 (S.D.N.Y. 1921); whose value lies in utility rather than artistic merit, have all been found copyrightable. The intellectual effort required for the creation of a computer program is really not different from the efforts which created the above-described works which have been held to be copyrightable.

that sets forth a set of instructions permitting the process to occur. As such it is copyrightable. The Subcommittee, therefore, believes that Congress was correct in treating them as "works of authorship" in a legislative report[4/] accompanying the new Copyright Act.[5/]

II. Why Protection?

The cost of developing a complex computer program is far greater than the cost of duplicating it. Consequently, computer programs are likely to be disseminated only if:

1) The creator can recover all of his costs plus a fair profit on the first sale of the work, thus leaving him unconcerned about the later duplication of the work;

2) The creator can spread his costs over multiple copies of the work with some form of protection against unauthorized duplication of the work;

3) The creator's costs are borne by another, as, for example, when the government or a foundation offers prizes or awards; or

4) The creator is indifferent to his costs and donates the work to the public.

The consequences of the first possibility would be that the price of virtually any program would be astronomical, leading necessarily to a drastic reduction in the number of programs marketed. In this country, possibilities three and four occur but rarely outside of academic and government-sponsored

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4/ H.R. Rep. No. 1476, 94th Cong., 2d Sess. (1976).

5/ P. L. 94-553 (1976).

research. The Subcommittee is, therefore, satisfied that some form of protection is necessary to encourage the creation and broad distribution of computer programs in a competitive market.[6/] These works are the product of great intellectual effort and their utility is unquestionable. They permit the rapid and accurate completion of tasks that otherwise would have to be performed manually. Copyright protection in this instance is clearly of great social benefit in that it prevents the unjustifiable utilization of another's creative efforts without the permission of the original creator.

III. Why Copyright?

In examining numerous non-copyright and "hybrid" proposals for protection,[7/] as well as in giving thought to other considerations, the Subcommittee concluded 1) that programs are not different from other works now subject to copyright and, therefore, do not require a separate form of protection; 2) that the use of any of the other mechanisms for securing rights in intellectual property impairs broad access to or use of information to a far greater extent than does copyright;[8/] and 3) that many proposals for new forms of protection are in most respects indistinguishable from copyright.[9/]

6/ Indeed, several more or less mutually exclusive forms of protection are currently utilized. As discussed below, the Subcommittee believes that the public interest can best be served by clarifying the availability and scope of these forms, and, further, by providing for clear copyright protection. For a discussion of the economic impact of various forms of protection see Braunstein et al., Economics of Property Rights as Applied to Computer Software and Data Bases (1977) [NYU Report prepared under contract with CONTU].

7/ Such hybrid proposals generally combine elements of patent and copyright. See, e.g., the various proposals found in Kindermann, M., Special Protection Systems for Computer Programs, 7 I.I.C. Quarterly 301 (1976) and made to the World Intellectual Property Organization (WIPO) in Kolle, "Computer Software Protection -- Present Situation and Future Prospects," 13 Copyright (Mar. 1977) 72.

8/ For a comparison of the characteristics of the three major protective mechanisms see the table and the comments thereto, pp. 13-15.

9/ See Kolle, supra, note 7.

A reading of the Act of 1976 and consideration of its legislative history[10/] indicates that it was Congress' intent that computer programs be within its ambit. The Software Subcommittee does not, of course, base its conclusions solely upon Congressional intent. The Subcommittee does believe that copyright is appropriate for computer programs and that, because of a lack of precision in the new law, amendments, as indicated on pp. 16-23, are necessary to state clearly that it encompasses computer programs and to clarify the scope of copyright in such works.

From a policy standpoint, the worth of copyright protection is manifest. As one commentator observed at the time the Register of Copyrights first agreed to accept programs for copyright registration,[11/] the other forms of protection do little to encourage the dissemination of information.[12/] Any form of protection for computer programs other than copyright would restrict society's

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10/ See P.L. 94-553, §§101, 102, 301 and accompanying House and Senate Reports. The House report is particularly instructive. Concerning "literary works," in which copyright subsists, it states: "The term does not connote any criterion of literary merit or qualitative value...it includes...computer programs...." H.R. Rep. No. 1476, 94th Cong., 2d Sess. 54 (1976).

11/ From 1964 until January 1, 1978, the authority for seeking copyright in a program has been, and will continue to be, the Register's letter of May 19, 1964.

12/ "Without copyright protection, the developer of a computer program is confronted with a choice between carefully concealing the program or contributing it to the public by disclosure. Neither alternative permits a large scale distribution with the reasonable expectation of financial compensation. There is a possibility of protecting computer programs under the law of unfair competition. The most likely source of protection, however, the doctrine of trade secrets, would not seem capable of supporting a system of wide scale commercial distribution. An idea will not be protected as a trade secret if examination of the marketed manufactured item would completely disclose it to the observer. Moreover, the requirement of secrecy is both stringent and unclearly delineated, and the remedies available are limited." Note, Copyright Protection for Computer Programs, 64 Colum. L. Rev. 1274, 1298-1299 (1964).

access to information to a greater extent than does copyright because such other forms afford proprietors far greater monopoly power over their wares.

The most significant of these forms are (1) federal patent protection, (2) the various state laws of trade secrecy, and (3) the laws of unfair competition. The use of patents to protect software gives rise to at least three problems. In the first place, the availability of patent protection for programs is unclear.[13/] In the second place, even if available, only software meeting the rigid standards of novelty and nonobviousness required by Title 35 of the United States Code could be patented. In a "patent-only" world, therefore, most programs would be unprotected and those which were patented would receive protection -- extremely strong protection -- against use by others of the underlying concepts or principles of operation. The requirements for copyright protection are much less stringent; which means that all such works will be protected subject only to the requirement of originality. The strength of the protection will be substantially less than that afforded by a patent. And, in the third place, unlike copyright, patents can be used to protect "processes,"[14/] and

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13/ Recent decisions in the Court of Customs and Patent Appeals ordered the award of patents to software (or softwarelike creations) over the strenuous objection of two judges who held that Gottschalk v. Benson, 409 U.S. 63 (1972) and Dann v. Johnston, 425 U.S. 219 (1976), cases in which the Supreme Court found software to be ineligible for patent protection, precluded such protection. In re Chatfield, No. 76-551 and In re Noll, No. 74-541. The precedential value of these cases in the face of possible Supreme Court review seems questionable, at best. In any event, the Patent and Trademark Office announced on December 14, 1976, that it would rely on Benson rather than Noll or Chatfield "since further review or clarification [of them] may be forthcoming." 954 O.G. 550, 312 P.T.C.J. at A-12. The Solicitor General has asked the Supreme Court to review the decisions in Noll and Chatfield.

14/ Cf. Title 35 U.S.C. §101 and Benson, n. 13, supra, with P.L. 94-553, §102(b).

under the patent system the independent development of the same work is an infringement. The independent creation of a work identical to a pre-existing copyrighted work does not infringe the copyright in that prior work.

The most widely used form of protection currently employed is trade secrecy.[15/] Its deficiencies may be briefly listed:

1) Hostility to the free exchange of ideas -- A secret is just that--if maintained it may contribute to its owner's profit but not to the broad dissemination and interchange of information.

2) Inappropriateness with respect to general purpose programs having a potentially large market -- A trade secret by its very nature is something that its owner cannot distribute widely, since the distribution of each copy of the item in which a trade secret is asserted makes it increasingly likely that a breach in security and, therefore, loss of the secret will occur.

3) Ease of loss -- Trade secrecy protection generally becomes unenforceable through disclosure of the confidential process or formula to anyone outside the scope of the agreement between the entrepreneur and his customer(s). Whether such disclosure is intentional, inadvertent, or caused by the "disclosee" is of no moment as far as the loss of the secret is concerned. Not only can a trade secret be lost through laxity on the part of its owner but tenacity can yield the same result, as where the record of the trial renders the "secret" public, and thus unenforceable.

4) Expense -- Each transaction involving a "secret" program requires substantial expenditures to maintain its security, thereby adding considerably to the cost of the product.

15/ For a general discussion of the use of trade secrecy in software protection, see Bender, Trade Secret Protection of Software, 38 Geo. Wash. L. Rev. 909 (1970) and 3 Computer L. Serv. §4-4, art. 2 (1975).

5) Non-uniformity -- Each state is free to develop or not to develop the doctrine as it sees fit. 16/ Moreover, as a judicially created concept there is frequently ambiguity as to its existence and scope.

Copyright, in contrast, serves well those interests that trade secrecy serves poorly. Its protection is provided by uniform federal laws; transaction costs associated with copyright are smaller than those associated with other forms of protection for intellectual property; under Chapter 4 of the new law copyright protection is difficult to lose; 17/ copyright is designed to promote the dissemination of information and is particularly well-suited to large scale distribution of intellectual property; and, unlike trade secret protection, it does not inhibit development of the art. 18/

The common law doctrine of unfair competition also may be used to protect software. It is based upon the principle that one may not appropriate a competitor's skill, expenditures and labor and prohibits false advertising or the "passing off" of another's work as one's own. Its utility is limited by one of the same shortcomings as trade secrecy -- lack of national uniformity -- and by the absence of one of copyright's strengths -- applicability to third-party users as well as to parties to an original transaction. A small body of federal law, developed around §43(a) of the Lanham Act, 19/

16/ See Nycum, S.H. The Criminal Aspects of Computer Abuse: Applicability of the State Penal Laws to Computer Abuse (1976); the article contains a discussion of the development of trade secrecy protection in its civil and criminal forms.

17/ See generally P.L. 94-553, §§405 & 406.

18/ See pp. 20 & 21, infra, for a discussion of the extent to which the new Copyright Act may affect the vitality of trade secrecy protection for computer programs

19/ 15 U.S.C. §1125(a).

has, to a certain extent, made unfair competition a federal doctrine as well.[20/] This provides rights supplementary to those found in copyright but because its scope is not as broad as copyright, it alone does not offer sufficient protection. For example, the unauthorized copying of a work for use, rather than resale, could be a copyright infringement without amounting to unfair competition.

The Subcommittee, of course, is aware of some testimony received by the Commission to the effect that copyright may be neither needed nor useful in protecting programs. Two general contentions were made: first, that the software industry is burgeoning in a market where the availability and efficacy of legal protection is unclear and, second, that, since infringements of programs are difficult to detect, enforcement of any law is rendered difficult.

As to the first contention, it is not true that the software explosion has occurred in the absence of copyright. Rather, it has occurred in a world in which an amorphous mix of trade secrecy, copyright, contractual and, perhaps, patent protection has been available and has been employed by various proprietors.

20/ See Allison, J. R., "Private Cause of Action for Unfair Competition Under the Lanham Act", 14 Am.Bus.L.J. 1 (1976).

For example, although no cases dealing directly with copyright infringement in computer programs have been reported and, despite the fact that to date only some 1300 programs have been registered with the Copyright Office, a large number of general purpose programs available for sale or lease bear copyright notices.[21/] These notices have permitted copyright holders to achieve settlements with suspected infringers without the necessity of instituting suit.[22/] Thus, it seems that, in at least some cases affixation of a copyright notice, without more, creates a level of protection in the market. The real question is not whether the industry is burgeoning -- with or without copyright -- but whether a change in the status quo that would decrease reliance on trade secrecy and other means of legal protection that restrict access to these works is desirable, particularly in view of trends in the industry toward the marketing of software products totally independently from the machines themselves.

In short, as stated above, the Subcommittee believes that the Commission's recommendations should be that the law specifically provide for the protection of programs and that it do so in a manner designed to avoid the rapid obsolescence which befell the 1909 Copyright Act. If those recommendations lead to reduced reliance on trade secrecy protection, they will undoubtedly have the beneficial effect of causing the products of the industry to become more widely available at a lower unit price.

21/ Including, for example, all of the program products from IBM and the Digital Equipment Corporation.

22/ Testimony of Daniel McCracken at the November, 1976 meeting and telephone conversation with Elmer Galbi, Esq. of IBM.

With respect to the second contention -- the asserted difficulty concerning enforcement -- the possibility that violations of law may go undetected cannot militate against the law's existence; it merely suggests that more efficient means of enforcement need to be sought.

The following table shows, at a glance, some of the considerations weighed by the Subcommittee in making its determination. We have included comments to those items which are starred (*). In the Subcommittee's view, the answers to such econo questions as the effect of protection on the market and the opportunity it creates for an uncompetitive rate of return tend to show that, of the various potential mode of protection, copyright has the smallest negative impact. The reports from the co tractors retained by the Commission to assess the economic impact of the several modes of protection should shed more light on this important topic.[23/]

Characteristics of Protective Mechanisms

	Copyright	Patent	Trade Secrecy
General Considerations			
1. National Uniformity	yes	yes	no
2. Protection Effective Upon	creation of work	successful prosecution of application	entrance into contractual relationship
3. Cost of Obtaining Protection	nil	moderate	moderate
4. Term of Protection	life plus 50 years or 75 years	17 years	possibility of bot perpetual protecti and termination at any time
* 5. Cost of Maintaining Protection	nil	nil	significant

23/ The NYU Report, supra, note 6, received May 5, 1977, suggests that copyright is superior to trade secrecy with respect to increased information in the marketplace, the development of multi-purpose software, the reduction of duplication of efforts and diversification of available products.

General Considerations (cont'd)	Copyright	Patent	Trade Secrecy
* 6. Cost of Enforcing Rights Against Violators	moderate	moderate	higher
7. Availability of (a) Statutory Damages (b) Attorney's Fees from Infringers	a. yes b. yes	a. no b. yes	a. no b. no
8. Protection Lost by	gross neglect	unsuccessful litigation	disclosure
Software Considerations, Including Effects of Subcommittee Proposals			
9. Consistency with other copyright areas	yes	no	no
* 10. Availability of protective mechanism for some programs	yes	unclear	yes
* 11. Universal Availability of protective mechanism for all programs	yes	no	no
12. "Process" protectable	no	yes	yes
13. Suited to Mass Distribution	yes	yes	no

COMMENTS WITH RESPECT TO STARRED ITEMS IN THE TABLE

Item No.

5. Once copyright or patent is secured, it costs little or nothing to keep it in force; on the other hand, expensive security measures must be taken to avoid losing a trade secret. The cost of this security is, of course, passed on to the user.

6. Copyright and patent infringers in some instances can be persuaded to comply without the institution of a lawsuit. If litigation is necessary, it may be expensive, but in copyright and patent cases attorney's fees may be awarded to successfu' plaintiffs. At trial the proprietor bears the burden of proving that the trade secret is valid; in patent cases there is a presumption of validity and in copyright actions a registration

certificate is prima facie evidence of the copyright's validity. The proof of the validity of a trade secret may be expensive and difficult, as it almost necessarily involves the retention of expert witnesses. Although such witnesses may be needed in copyright and patent suits in those cases there will have been at least some compliance with federal law regarding public notice of claimed rights before the lawsuit is initiated. A suit to enforce a trade secret, even though successful, may destroy the secret if it is offered into evidence and becomes part of the public record of the trial.

10. As of the present, doubt exists whether programs are proper subjects for patent protection. (See p. 8, supra).

11. Even if programs are patentable, only those which are truly novel and nonobvious will be protected. Trade secrecy is, of course, unavailable when the contents of a program have been disclosed.

IV. How Copyright?

The object of any amendments to the copyright law should be to clarify the rights of the holder of copyright in a computer program and of its users. The need for such clarification is created by the way in which programs are used. In the absence of §117 [24/] the loading or inputting of a program into a computer would constitute the preparation of a copy. Section 106(1) of the law provides that copying is the exclusive right of the copyright owner. Thus, any use of programs by strangers would constitute infringements unless language of the type proposed below is adopted to replace the current §117.

The current copyright practice would be but slightly affected if the Subcommittee's recommendations were adopted. Indeed, it is believed that the suggested changes will lead not only to satisfactory protection against the misappropriation of software but also to increased consumer and competitor knowledge concerning the nature of the goods in the market.

24/ The Subcommittee anticipates that any Congressional action with respect to any computer-related Commission recommendations will include the deletion of the "interim" or "moratorium" provisions of §117.

1. Proposed New Definition:

The Subcommittee believes that it would be appropriate to include among the definitions in §101 the definition of a computer program. We suggest the following language:

> "A 'computer program' is a fixation of a series of statements or instructions to be used in conjunction with a computer in order to bring about a certain result."

A statutory definition is needed if, as proposed, a new section pertaining to computer programs is to be included in the Copyright Act. There are three reasons why this definition is useful. First, since it lacks data processing jargon and phrases concerning the way in which programs are used, it is not tied to current technology. The Subcommittee believes that changes in the way computers work should not change the extent to which copyright subsists in programs. The definitions of "literary works" and "copies" now found in §101 preclude the necessity of describing in the definition the forms or media in which programs may be fixed. And, third, no attempt need be made in the definition to address explicitly the program/algorithm version of the idea/expression distinction. This distinction, which has caused great uncertainty in the world of copyright, is not, of course, unimportant. However no further statutory elucidation is required because the new law already deals with it adequately.

§102(b) now provides that:

> "In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated or embodied in such work."

That portion of the House report which deals with that provision contains the following passage:

> "Some concern has been expressed lest copyright in computer programs should extend protection to the methodology or processes adopted by the programmer, rather, than merely to the 'writings' expressing his ideas. Section 102(b) is intended among other things, to make clear that the expression adopted by the programmer is the copyrightable element in a computer program, and that the actual processes or methods embodied in the program are not within the scope of the copyright law." 25/

Also important is the House's statement of the content of the term "literary works" to which copyright protection extends:

> "It also includes . . . computer programs to the extent that they incorporate authorship in the programmer's expression of original ideas, as distinguished from the ideas themselves." [Emphasis supplied]. 26/

These principles have been employed by courts in disposing of copyright cases involving the idea/expression issue. 27/ In each instance, where the question arose, the court made clear that copyright protection cannot subsist in works capable of being expressed in only a particular and limited manner on the grounds that free access to the expression is necessary in order to utilize and convey the unprotectable idea. Any work designed to control the operation of a computer that can be expressed only in a particular and limited manner is no more subject to exclusivity under the aegis

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25/ H.R. Rep. No. 1476, 94th Cong., 2nd Sess. 57 (1976).

26/ H.R. Rep. No. 1476, 94th Cong., 2nd Sess. 54 (1976).

27/ See Baker v. Selden, 101 U.S. 99 (1879); Morrissey v. Procter & Gamble Co., 379 F.2d 675 (1st Cir. 1967); Crume v. Pacific Mutual Life Ins. Co., 140 F.2d 182 (7th Cir. 1944).

of copyright than is a method of accounting,[28] a set of Social Security Account Number Sweepstakes Rules[29] or the plans for a company's reorganization.[30]

It should be emphasized that the protection which would be afforded programs by copyright would not serve to block the use of a program's underlying concepts by others since copyright never protects ideas, but only the expression thereof. When specific computer instructions, even though previously copyrighted, are the only and essential means of accomplishing a given task, their later use by another will not amount to an infringement. In discussing an insurance company's use of a lawyer's copyrighted forms, a federal court of appeals stated in Continental Casualty Co. v. Beardsley:[31]

> "the use of specific language...may be so essential to accomplish a desired result and so integrated with the use of a...conception that the proper standard of infringement is one which will protect as far as possible the copyrighted language and yet allow the free use of the thought beneath the language. The evidence here shows that [the company] insofar as it has used the language of [the lawyer's] forms has done so only incidental to its use of the underlying idea.... In so doing it has not infringed." [Empahsis added].

In the opinion of the Subcommittee, the above underscored language in Beardsley indicates that copyright protection for programs would indeed be "thin," because in the programming field the use of specific language -- instructions -- may, in some instances, be so basic, essential and integrated with the underlying idea that use of the same language would not constitute infringement.

28/ Baker v. Selden, 101 U.S. 99 (1879).

29/ Morrissey v. Procter & Gamble Co., 379 F.2d 675 (1st Cir. 1967).

30/ Crume v. Pacific Mutual Life Ins. Co., 140 F.2d 182 (7th Cir. 1944).

31/ 253 F.2d 702 (2nd Cir. 1958). See, also, Harcourt, Brace & World, Inc. v. Graphic Controls Corp., 329 F.Supp. 517 (S.D.N.Y. 1971).

2. Proposed New §117 (to replace §117 as enacted):

"§117: Limitations on Exclusive Rights: Computer Programs

Notwithstanding the provisions of §106, it is not an infringement for the rightful possessor of a copy of a computer program to make or authorize the making of another copy of that computer program provided:

(1) that such new copy is created as an essential step in the utilization of the computer program in conjunction with a machine and that it is used in no other manner, or

(2) that such new copy is for archival purposes only and that all archival copies are destroyed in the event that continued possession of the computer program should cease to be rightful.

Any copies prepared in accordance with the provisions of this section may be leased, sold, or otherwise transferred by the person making such copies only as part of the lease, sale, or other transfer of all rights in the program."

The proposed §117(1) is designed to make it clear that the "inputting" of a program by a rightful possessor is not an infringement.[32/] Section 117(2) is designed to permit a user to prepare a copy for storage as insurance against loss in the event of destruction of the copy rightfully acquired. This section is worded in a manner similar to several already existing limitation sections.[33/] Provisos (1) and (2) serve to make it clear that blanket permission to copy is not granted to an intended user and that any copying by a wrongful possessor is a violation of §106(1). Wrongful possession would

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32/ The Whitford Report, note 2, supra, reflects a similar result. Its fifth recommendation -- declaring unauthorized use an infringement -- is redundant if the loading of a program into a computer is the preparation of a copy. If, as seems clear, U.S. copyright law provides in effect that loading is copying, then, no separate "use" prohibition is necessary. Many interested parties have suggested that the law should provide the owner of copyright in a computer program with a right similar to the right of public performance found in §106(4) of the new law. Because all use of a program requires the preparation of a copy, the Subcommittee is of the belief that no "use" right, beyond that in the proposed §117, be recommended. Simply put, by regulating the copying of a program, its use is also regulated.

33/ Cf. §§107-109.

include but not be limited to,

(a) possession of a "pirate" copy,
(b) possession of a stolen but "non-pirate" copy,
(c) retention of any copy after the expiration of a period of rightful possession, or
(d) retention of any copy after transferring all rights in a program to another.

Copying by a rightful possessor outside the scope of the provisos would also be barred. Thus, in the absence of explicit authorization from the copyright owner, the preparation by the user of multiple copies, whether for internal distribution or transmission to others would be an infringement.

It should be noted that the conversion of a program from one computer "language," such as COBOL, to another, such as FORTRAN, would amount to the preparation of a derivative work and would remain the exclusive right of the copyright owner.

Owners of copyrights in programs of which copies are sold could in no way restrain the further alienation of such copies, but their vendees could not make and vend or retain additional copies without infringing the copyright. The utilization of a pirate copy would involve two infringements -- first, the preparation of the pirate copy and second, its use in which another copy would necessarily be prepared

3. Preemption.

Section 301 is designed to make it clear that trade secret protection is preempted to the extent that such protection is not "different in kind from copyright infringement."[34/] Thus trade secrecy protection could not be asserted where its purpose was to prevent the copying of a work. After January 1, 1978, copyright will subsist in all programs from the time of their first fixation in tangible media of expression. The proprietor will be required to seek compensation for misuse of the program through an action against the infringer for statutory damages or actual damages

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34/ H.R. Rep. No. 1476, 94th Cong., 2nd Sess. 132 (1976).

and profits, remedies to which he, as all other copyright owners, would be entitled. Simply put, the proprietor who seeks revenues from users of his copyrighted work -- be it a book, photograph or computer program -- ought not to be entitled to allege that his work, although available to users, is somehow "secret," in the same way that a carefully guarded formulation for a soft drink syrup may be.

Any resultant reduction in the use of trade secrecy should have at least two salutary effects. It should reduce the number of occasions when a programmer has to repeat the prior effort of another because that prior effort is kept secret. It should, according to the NYU study,[35/] reduce the social waste inherent under trade secrecy which results when new programs are made unnecessarily complex so that their essence is difficult for even skilled readers to discern. None of this, however, should be taken as suggesting that no program may ever be protected as a trade secret. Nothing in this proposal compels a programmer to publish his work. Nor would the programmer be prevented from entering into contracts designed to restrict disclosure of the program. However, as seems self evident, trade secrecy could not be relied upon if a program were widely marketed or otherwise broadly distributed.

4. Term of Protection.

Because all other works of authorship receive the period of protection provided by §302 of the 1976 Act, and because the scope of protection afforded programs by copyright may be relatively "thin,"[36/] there seems to be no persuasive reason to add further complexity to the law by altering the

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35/ Supra, note 6.

36/ Supra, pp. 16-18.

uniform term of protection for these works. Although most programs may have shorter useful lives than the full term provided by the statute,[37/] this also is true of other works, such as directories, which receive full-term protection. With regard to all types of works, it is the exceptional one that has a useful life of several decades, but it is exactly those works that the lengthy periods of protection in §302 were enacted to protect. It should also be noted that no one is harmed when short-lived works remain protected beyond their brief periods of utility. For example, a telephone directory published in 1978 will remain under copyright through 2053 with no apparent adverse effects upon society.

5. Suggestions Concerning Regulations.

The Subcommittee recommends that notice, deposit and registration regulations be promulgated by the Register of Copyrights. However, certain general comments seem in order.

Copyright notice in the form prescribed in §401(b) should be required on all formats in which a program is marketed.[38/] On programs capable of being read by the unaided eye such notice should appear prior to the list of instructions that comprise the program. Those programs which can be read only with the aid of a machine or device should contain notice in the medium of fixation such that the contents of the program cannot be listed without reproducing the notice in the position just described. Further, containers in which copies of such "machine-readable" programs are sold, leased or transported should bear notice

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37/ In addition, the Commission received testimony that operating system software and programs, such as DIALOG, used in conjunction with data bases, often have useful lives in excess of ten years.

38/ Such notice must consist of the word "Copyright," the abbreviation "Copr." or the symbol © together with the year of first publication and the name of the copyright owner.

notice as should such devices as 1) reels upon which magnetic tape is wound or 2) semiconductor chips in which programs are stored.

With respect to deposit and registration requirements, the Subcommittee believes that regulations should promote public access to computer programs while being fluid enough to accommodate future changes in software technology. Several options appear available. A system of "temporary" deposit, similar to the practice followed with respect to motion pictures, might be appropriate. In the alternative, permanent deposit of complete copies of original versions of programs could be required, with descriptions rather than complete copies of amended versions being filed thereafter. In any event, such requirements can best be established by the Copyright Office.

V. Postscript

A previous version of this report was discussed at the Commission meetings in February and April, 1977. On those occasions there were expressions of reservations about the Subcommittee's recommendations. This draft of the report includes changes that respond to comments and criticism made at those meetings. In addition, it is anticipated that dissenting views will accompany this report when it is publicly circulated for comment.

Substantive issues discussed were:

1. Whether, as a policy matter, software should be protected.

2. Whether the intent underlying the copyright clause of the Constitution encompasses software.

3. Whether the inclusion of software in the scope of copyright depreciates the nation's cultural heritage.

4. Whether new technologies, deserving of protection, should be protected by a new law other than copyright.

Concern was expressed with respect to the Software Subcommittee's report regarding:

a) Why witnesses from the computer industry but not representatives of authors and the public interest have been heard.

b) Whether the Subcommittee had considered public policy issues in making its determinations.

c) How the Subcommittee reacted to a division among software witnesses that appeared to be eleven for copyright protection and sixteen for other forms of protection.

The current version of this report is responsive to several of these items. The rationale for protection in whatever form is outlined in Part I, entitled "Why Protection?" and in the NYU report. The constitutional question is discussed in note 3. The policy issues which are the foundation upon which the Subcommittee based its report are discussed in varying detail at pages 5, 7-10, and 13-15. A new form of protection is not recommended because programs are instructions fixed in a tangible medium of expression and, by that token, presently copyrightable and because Congress is likely to prove unreceptive to proposals to protect each new form of expression with a separate special statute. In a recent study for the World Intellectual Property Organization (WIPO) the author, who generally proposes that a new form of protection be created, notes that

> "in a number of countries it would already be possible to give such protection [to programs] on the basis of current legislation on copyright...and consequently special legislation would not be necessary. In various countries, including the United States...there would seem to be no particular desire to set up special provisions to protect software." 39/ (Emphasis added).

39/ Kolle, Computer Software Protection--Present Situation and Future Prospects, Copyright, March, 1977, 72.

Turning to the asserted division of the software witnesses, it should be noted that it was not precisely 11 for copyright and 16 for something else. In 1976, the Commission received oral and written testimony from 20 witnesses representing 18 organizations. Their views may be interpreted as follows: 11 favored copyright, 3 patent, 3 trade secrecy, 8 had no preference and 2 perceived no need for protection. Since several persons supported copyright and one or more other forms of protection, the same person may be counted in the final tabulation as having "cast" his "votes" both "for" and "against" copyright. Finally, of course, the Subcommittee has based its recommendations not upon a headcount but upon a consideration of all the factors that bear on the issues at hand. It believes that the needs of all parties and the public may best be served by amending the Copyright Act as it suggests.

With respect to the nature of the witnesses, it should be pointed out that notice of all Commission meetings, as well as invitations to interested parties, have been published in the Federal Register and in more than a dozen press releases which were sent to the addressees on a mailing list currently containing more than 400 names. The Author's League was specifically asked to encourage individual authors to contribute to the proceedings of the Commission. Although some public interest organizations apparently screen the Federal Register for items of interest, the Commission's work has apparently not aroused interest within such public interest and consumer groups. To ensure that all viewpoints are made known, the Commission has entered into two contracts with

public interest organizations to provide additional input of the type not yet received. The results of those studies should be available by July, 1977.

The Subcommittee believes that affording copyright to software could not constitute a threat to cultural values. That public perceptions, beliefs and actions might vary depending upon whether computer programs are in or out of copyright seems rather unlikely. Works of both great and small aesthetic value should be similarly protected lest the government acquire the power to assess the merits of a work and choose only those works which in its view are "good enough" for copyright. The copyright law, applying as it does to all forms of expression, should be broad enough to shelter the works of Nobel laureates and computer programmers without causing any confusion about which is which.